

WHAT IS CLAIMED IS:

1 1. An Intelligent Network Service Control Point (IN-SCP) for
2 providing services to users in a telecommunications network, said IN-
3 SCP comprising:

4 at least one Call Processing Language (CPL) script that generates
5 a call-control instruction when the script is executed; and

6 means for executing the CPL script in response to receiving a
7 service trigger for the script.

1 2. The IN-SCP of claim 1 wherein the CPL script is defined by
2 the user, and the IN-SCP includes a CPL script interpreter for mapping
3 semantics of the CPL script to IN procedural detection points.

1 3. The IN-SCP of claim 2 further comprising at least one block
2 of service provider-defined IN service logic that provides at least one
3 service when executed.

1 4. The IN-SCP of claim 3 further comprising:
2 a user database that stores, for each user, a list of IN service logic
3 and CPL scripts that are to be executed for each service trigger that is
4 received by the IN-SCP; and

5 a service logic prioritizer that determines an order in which the IN
6 service logic and the CPL scripts are to be executed.

1 5. A system in a telecommunications network for providing
2 services to users, said system comprising:

3 an Intelligent Network Service Control Point (IN-SCP), said IN-
4 SCP comprising:

5 at least one Call Processing Language (CPL) script that
6 generates a first call-control instruction when executed;

7 means for executing the CPL script in response to receiving
8 a service trigger for the script; and

9 communication means for receiving the service trigger from
10 a call server and sending the call-control instruction to the call server;

11 a user profile database that stores the service trigger; and

12 a call server that retrieves the service trigger from the user profile
13 database, sends the service trigger to the IN-SCP, receives the call-control
14 instruction from the IN-SCP, and executes the call-control instruction to
15 provide the service to the user.

1 6. The system of claim 5 wherein the CPL script is defined by
2 the user, and the IN-SCP includes a CPL script interpreter for mapping
3 semantics of the CPL script to IN procedural detection points.

1 7. The system of claim 6 wherein the IN-SCP also includes at
2 least one block of service provider-defined IN service logic that provides
3 a second call-control instruction when executed.

1 8. The system of claim 7 wherein the IN-SCP also includes:
2 a user database that stores, for each user, a list of IN service logic
3 and CPL scripts that are to be executed for each service trigger that is
4 received by the IN-SCP; and
5 a service logic prioritizer that determines an order in which the IN
6 service logic and the CPL scripts are to be executed.

1 9. The system of claim 5 wherein the CPL script is defined by
2 the user, and the system further comprises a network administrative entity
3 that verifies the CPL script and sends the verified script to the IN-SCP.

1 10. The system of claim 9 wherein the administrative entity also
2 determines the service trigger for the CPL script and sends the service
3 trigger to the user profile database.

1 11. A method of provisioning a service in a telecommunications
2 network having an Intelligent Network Service Control Point (IN-SCP),
3 a user profile repository that stores a user profile, and a network
4 Administrative Entity (AE), said method comprising the steps of:

5 receiving in the AE, a user-defined Call Processing Language
6 (CPL) script that generates a call-control instruction when the script is
7 executed;

8 determining by the AE whether the CPL script can be successfully
9 executed in the network; and

10 upon determining that the CPL script can be successfully executed
11 in the network:

12 modifying the user profile in the user profile repository to
13 include a service trigger for the CPL script; and

14 storing the verified CPL script in the IN-SCP.

1 12. The method of claim 11 further comprising rejecting the
2 script upon determining that the CPL script cannot be successfully
3 executed in the network.

1 13. The method of claim 12 further comprising, before the step
2 of determining whether the CPL script can be successfully executed in the
3 network, the step of determining by the AE whether the CPL script is
4 well-formed.

1 14. The method of claim 13 further comprising rejecting the
2 script upon determining that the CPL script is not well-formed.

1 15. The method of claim 11 further comprising, upon
2 determining that the CPL script can be successfully executed in the
3 network, modifying the user profile in the user profile repository to
4 include an identification of the IN-SCP where the CPL script is stored.

1 16. A method of providing a service to a user in a
2 telecommunications network having an Intelligent Network Service
3 Control Point (IN-SCP), a user profile repository that stores a user profile,
4 and a call server that controls calls to and from the user, said method
5 comprising the steps of:

6 storing a user-defined Call Processing Language (CPL) script in the
7 IN-SCP, said script generating at least one call-control instruction when
8 the script is executed;

9 receiving in the IN-SCP, a service trigger for the script from the call
10 server;
11 executing the CPL script in response to receiving the service trigger
12 for the script;
13 sending the call-control instruction to the call server; and
14 executing the call-control instruction by the call server to provide
15 the service to the user.

1 17. The method of claim 16 further comprising, before the step
2 of executing the CPL script, mapping semantics of the CPL script to IN
3 procedural detection points.

1 18. The method of claim 17 further comprising the steps of:
2 determining whether the IN-SCP also stores service provider-
3 defined IN service logic for the user; and
4 upon determining that the IN-SCP also stores IN service logic for
5 the user, executing the service provider-defined IN service logic before
6 executing the user-defined CPL script.

1 19. The method of claim 18 wherein the call server retrieves user
2 profile information from the user profile repository when the user
3 registers with the network, and the method further comprises, after the
4 step of storing the user-defined CPL script in the IN-SCP, the steps of:
5 receiving a call in the call server that is associated with the user;
6 determining by the call server whether a service trigger is to be
7 generated; and
8 sending a request for call-control instructions from the call server
9 to the IN-SCP, said request including an identification of the user and the
10 service trigger.

1 20. The method of claim 19 further comprising, after the step of
2 receiving the service trigger in the IN-SCP, the steps of:
3 retrieving a service logic (SL) list from a user database in the IN-
4 SCP; and
5 prioritizing the service provider-defined IN service logic and the
6 user-defined CPL script.

1 21. The method of claim 20 wherein the step of prioritizing the
2 service provider-defined IN service logic and the user-defined CPL script
3 includes prioritizing the service provider-defined IN service logic and the
4 user-defined CPL script in a Service Interaction Manager (SIM) in the IN-
5 SCP.

1 22. The method of claim 20 further comprising, after the step of
2 prioritizing the service provider-defined IN service logic and the user-
3 defined CPL script, the steps of:

4 determining whether the service provider-defined IN service logic
5 and the user-defined CPL script are consistent; and

6 ignoring the user-defined CPL script if it is inconsistent with the
7 service provider-defined IN service logic.